

METHOD FOR SIMULATING SUBSEA MUDLIFT DRILLING AND WELL CONTROL OPERATIONS

Abstract

A method of simulating subsea mudlift drilling well control operations using a computer system. The method includes simulating a drilling circulation system. The simulation includes simulating drilling the wellbore at a selected rate of penetration, and the simulating drilling a wellbore includes simulating drilling selected earth formations. A kick is simulated at a selected depth in the wellbore, and the kick is simulated as a two-phase mixture including drilling fluid and a formation fluid. Controlling the kick is then simulated, and wellbore parameters are displayed via a graphical user interface connected to the computer system. The simulating drilling the wellbore is then repeated after the kick has been controlled.

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